CHEMICAL VISION

2010

3 February 1999

The Chemical Corps Vision 2010

DRAGON SOLDIERS,

When I talk to Leaders across the Army, almost without exception, they ask me what I am doing to protect their soldiers from weapons of mass destruction. The first thing I explain to them is that the role of the Chemical Corps is to train Battlestaff to support leaders and train Chemical units to provide reconnaissance (detection, identification), decontamination, and smoke operations. Officers, noncommissioned officers, enlisted soldiers and civilians, all play critical roles in defense against the threat. Our team is exploiting technological advances in NBC defense and smoke and obscurants to allow commanders and their staffs to minimize casualties and preserve combat power.

The bottom line is that when Army Vision 2010 discusses force protection and Joint Vision 2010 discusses NBC defense as part of full dimensional protection, the Chief of Staff of the Army and the Chairman of the Joint Chiefs of Staff both look to me as the Chief of Chemical to ensure mission accomplishment. In that regard, we are now providers of NBC support for the joint force.

We must protect the force during all phases—vulnerable deployment and entry operations through redeployment. We must also ensure that our strategic national interests are protected against any enemy, foreign or domestic, who attempts to employ chemical, biological, or radiological weapons. We must maintain the capability to mitigate the consequences of any NBC event, whether natural or man-made. We must provide experts in WMD effects and NBC defense operations to joint force commanders.

My vision for 2010 is that the Chemical Corps will be the catalyst for an NBC trained and ready capabilities-based Army. We will leverage technology and fully integrate doctrine, training, leader development, materiel, and soldiers to minimize casualties and preserve combat power for the Army and joint force.

This is a shared vision that belongs to all of us. We must work together, as a team, to turn this vision into reality. Together, we will forge a bright future for our Corps, our Army, and the joint force.

ELEMENTIS REGAMUS PROELIUM!

Chief of Chemical
U.S. Army

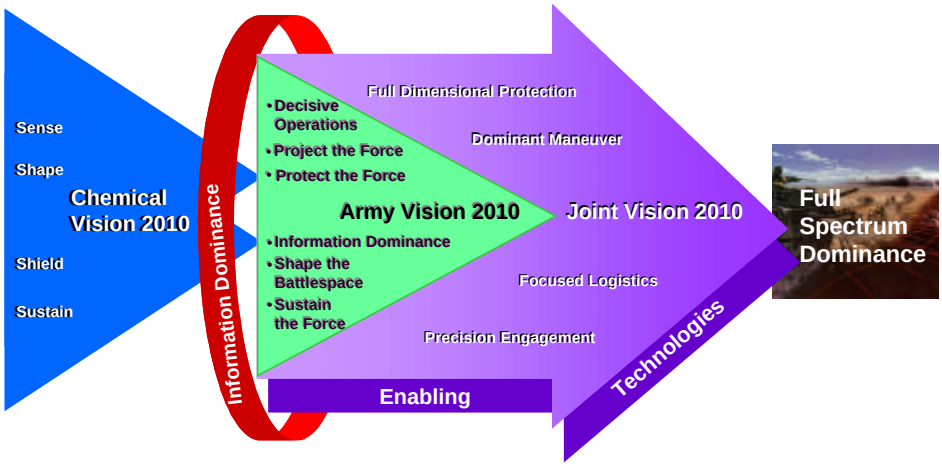
INTRODUCTION

Chemical Vision 2010 (CV 2010) is the azimuth for our Chemical Corps' contribution to both *Army Vision 2010* and *Joint Vision 2010*. It is a template for how our Corps leverages outstanding soldiers and chemical units to exploit technological opportunities to protect each and every one of our country's sons and daughters in uniform.

- *Joint Vision 2010* provides a coherent view of the future and the implications for joint operations expressed in terms of emerging operational concepts.

- *Army Vision 2010* focuses on the implications of that environment for the fundamental competency the Army contributes to joint operations—THE ABILITY TO CONDUCT PROMPT AND SUSTAINED OPERATIONS ON LAND THROUGHOUT THE ENTIRE SPECTRUM OF CRISIS. It identifies the operational imperatives and enabling technologies needed for the Army to fulfill its role in achieving full spectrum dominance.

- ***Chemical Vision 2010*** focuses on future force protection and information dominance requirements—THE ABILITY TO PROTECT THE FORCE THROUGHOUT THE DEPTH OF THE BATTLESPACE AND ACROSS THE FULL SPECTRUM OF OPERATING ENVIRONMENTS, and THE CAPABILITY TO COLLECT, PROCESS, AND DISSEMINATE AN UNINTERRUPTED FLOW OF INFORMATION WHILE EXPLOITING OR DENYING AN ADVERSARY'S ABILITY TO DO THE SAME. It identifies the principles and enabling technologies of NBC defense and smoke and obscurants for the Chemical Corps to fulfill our role in achieving protect the force, information dominance, and full dimensional protection.



THE THREAT

"Weapons of mass destruction pose the greatest potential threat to global stability and security. Proliferation of advanced weapons and technologies threatens to provide rogue states, terrorists, and international crime organizations, the means to inflict terrible damage on the United States, its allies, and U.S. citizens and troops abroad."

National Security Strategy
October 1998

Proliferation of Weapons of Mass Destruction

Despite treaties prohibiting their development, the proliferation of nuclear, biological and chemical weapons continues. The breakup of the former Soviet Union has raised concern over the spread of NBC weapons technology, and possibly weapons themselves, to Third World countries. Through the year 2010, we expect rogue states, terrorists and international crime organizations to attempt to acquire and refine WMD capabilities. Additionally, we can expect the development of novel and synthetic agents to continue. Besides classical chemical warfare agents, there is an array of other NBC hazards that can affect our forces. NBC hazards may result from nonnational or terrorist aggression, collateral damage from conventional weapons, natural disasters and industrial accidents, or other sources of environmental contamination. Ammonia, hydrogen cyanide and methyl isocyanate are examples of industrial chemicals with potential operational impacts. For example, the 1984 methylisocyanate release in Bhopal, India, resulted in 15,000 deaths (immediate and subsequent incident-related deaths). These substances and others are produced in industrial chemical plants around the world. Smaller countries and possibly some terrorist groups can convert industrial chemicals into weapons.

THE THREAT

NBC Terrorism

Terrorists, subnational groups, or individuals acting independently or with a threat-nation sponsor, may acquire a variety of NBC agents or toxic industrial chemicals and dissemination means. U.S. Army targets may include command and control facilities, ports of embarkation (POEs), ports of debarkation (PODs), troop concentrations, and rear area supply facilities. Terrorism could precede and continue during battlefield actions. Techniques could include the use of nonlethal chemical and radiological hazards that may not produce deaths, but could disrupt deployment or operations with a reduced potential for massive retaliation.

Threat Reconnaissance, Intelligence, Surveillance, and Target Acquisition (RISTA) Systems

An increasing number of countries are employing sophisticated RISTA systems for the detection, location and destruction of ground targets. The sale of military technology and equipment provides the opportunity for many potentially hostile nations to purchase improved RISTA systems. These systems will be both passive and active and will have better resolution with reduced sensor signatures. They will have the capability to detect low-signature targets. In addition to the ground-based threat throughout the depth of the battlefield, Unmanned Aerial Vehicles (UAVs), which are difficult to detect and destroy, will proliferate. RISTA systems range from simple optical sights (gunners' telescopic sights or binoculars) through sophisticated electrooptical devices (image intensifiers and thermal imagers) to battlefield radars. They can be further categorized by the frequency of the electromagnetic spectrum in which they operate (i.e., ultraviolet, visible, infrared, and millimeter and microwaves). Smoke and Obscurants will remain a vital ingredient of the countermeasures required to meet any future RISTA threat.

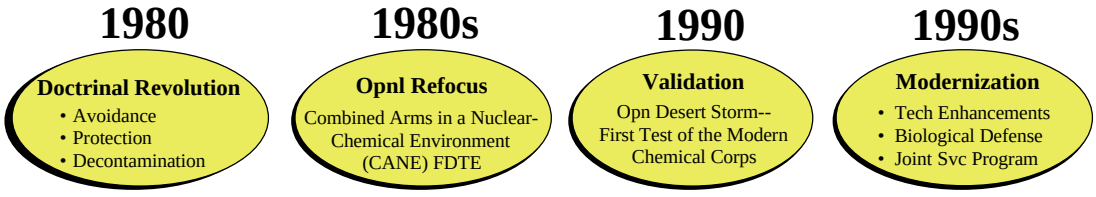
THE CHEMICAL CORPS—YESTERDAY, TODAY, AND TOMORROW

Yesterday

From the 1950s until the 1980s, the Army had few chemical companies, and they were designed primarily for either smoke or decontamination. NBC defense was a collection of separate procedures, rather than a system that maximized command and control and emphasized avoidance and decontamination. NBC reconnaissance was done by chemical units only to find decontamination sites. However, this began to change in the mid-'70s, following the Chemical Corps' reemergence as an operationally-required branch, when the Army started to take seriously the fundamentals of NBC defense and smoke and obscuration employment. In response to this, the Chemical Corps, in a doctrinal revolution, developed the three pillars of avoidance, protection, and decontamination.

During the '80s and early '90s, the Army conducted a series of studies called Combined Arms in a Nuclear Chemical Environment (CANE) Force Development Test and Experimentation (FDTE) which refocused our operational efforts. CANE FDTE added greatly to the understanding of performance degradation under NBC combat conditions, and demonstrated how operational tempo was reduced as a result of implementing NBC defense protection measures. These tests also underscored, for the first time, the vital requirement for collective protection systems. Later in the '90s, during Desert Shield and Desert Storm, we fielded the most chemical trained and ready force in our history. Desert Shield and Desert Storm also validated our need for improved biological defense and the continuing need for smoke operations, which were employed to provide smoke screens and blankets to support the commander's concept of operations.

In the past, we viewed CONUS installations and power projection platforms as free from threat, as "sanctuary." NBC defense measures would begin once we arrived in theater.



THE CHEMICAL CORPS

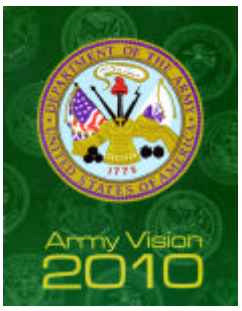
Today

The Chemical Corps supports the joint force's increased NBC protection needs during a time of decreased resources. Through our initiatives, we created multiple-purpose units, like the Heavy Division Chemical Company and the Corps Dual-Purpose (Smoke/Decon) Company. We increased our ability to preserve combat power in an NBC environment through the creation of NBC Recon units and standoff detectors that aid in contamination avoidance, and through improved decontamination equipment and procedures. We have fielded biological detection units to provide defense against this growing threat. Information dominance is supported through development of smoke and obscurants in the visual, infrared and millimeter ranges.

The Chemical Corps is working to provide doctrine, equipment, and training that allow the best protection from NBC hazards for the least operational "cost." Our NBC defense strategy is to employ "focused defense" against NBC threats so that only units directly affected by the hazard would be warned to take protective measures. Using focused defense, large numbers of forces will no longer assume a full protective posture as a precautionary measure. Focused defense allows the force to operate in the lowest required protective posture, without unacceptably increasing the risk to soldiers.

We are leading the Army's effort in addressing WMD Homeland Defense. Today, we are beginning to understand that CONUS installations and power projection platforms are no longer a sanctuary. We recognize that the very ability to execute our force projection strategy requires NBC Focused Defense over strategic forces and means from premobilization through conflict termination.



Tomorrow

In addition to our Army missions, the Chemical Corps will provide NBC defense capabilities to the joint force. This support will be provided by active, USAR, and National Guard units, totally integrated with chemical command and control. This force structure will support the joint force during the vulnerable phases of reception, staging, onward movement and integration (RSO&I), as well as during operations, reconstitution and redeployment.

The digitization of the Army will provide an opportunity to dramatically improve NBC Situational Awareness (where contamination is, where it has been and where it is going) and the NBC Warning and Reporting System, which enable focused defense. Force XXI realizes enhancements in chemical and biological detection, the NBC Warning and Reporting System, individual and collective protection, decontamination, and smoke and obscurants through the fielding of funded programs.

The Army will transition from **Force XXI** through **Army Vision 2010** (AV 2010) to the **Army After Next** (AAN). The Chemical Corps' support to our transitioning Army must leverage technology applications to achieve the ***Chemical Vision 2010*** principles of **sense** NBC hazards**, shield** the force**, sustain** operational capability, and the foundation principle of **shape** the battlespace.

THE CHEMICAL CORPS

Developing technologies will significantly expand the application of smoke and obscurants to gain information dominance. Using advanced counter-RISTA multi-spectral obscurants, mechanized and dual-purpose smoke units will directly enhance the commander's information dominance. Smoke and obscurant missions will be able to cover large areas over long duration, and no longer be wind direction dependent. We will do this by including remote employment capabilities in smoke units in conjunction with direct and indirect fire capabilities. This will allow commanders to open and close windows of observation, while maintaining uninterrupted friendly observation and communication.

THE CHEMICAL CORPS

WMD Homeland Defense

Tomorrow, we will not have the luxury of viewing CONUS as a sanctuary. America's unrivaled military superiority means that potential enemies (whether nations or terrorist groups) that choose to attack us will be more likely to result to asymmetric attack instead of conventional military assault. Moreover, easier access to sophisticated technology means that the destructive power available to terrorists is greater than ever. Adversaries may be tempted to use unconventional tools, such as weapons of mass destruction, to target our cities and disrupt the operations of our government.

The U.S. Army Homeland Defense Center (USAHLDC) will be established at Fort Leonard Wood, Missouri, and the Chemical Corps will play a leading role. The USAHLDC will serve as the Doctrine, Training, Leader development, Organization, Materiel, and Soldier (DTLOMS) integrator for Department of the Army units and agencies designated with a WMD-Homeland Defense mission. These units will provide technological support to Federal Agencies such as the Federal Bureau of Investigations (FBI) and the Federal Emergency Management Agency (FEMA) for crisis management and consequence management.

THE CHEMICAL CORPS

Tomorrow

Weapons of Mass Destruction and Joint NBC Defense

As we approach the beginning of the 21st century, the leadership of this nation has unanimously declared weapons of mass destruction the most serious continuing threat to national security. In recognition of this overwhelming threat, the Chairman of the Joint Chiefs of Staff has named weapons of mass destruction and NBC defense as the number one training priority for joint forces. There are two great WMD challenges that face the joint community:

- Organizations and Staffing. As this Vision reaches you, the President has proposed an initiative to establish a NATO Center for Weapons of Mass Destruction. Such a center for centralized weapons of mass destruction response control, intelligence and planning has never existed before, despite the growing WMD threat. There is no comparable entity, focused on strategic and operational warfighting, *even within the United States Department of Defense.* The Chemical Corps must take the initiative to address shortfalls in our current joint forces organization. Our own Department of Defense requires a Weapons of Mass Destruction Defense Command of even greater scope than that proposed by the President for NATO. This Command must interface with MACOMs, Joint Staffs and CINCs, *which must themselves be* dramatically enhanced by expert staffs in weapons of mass destruction effects and NBC defense operations.

- Training. We must take visionary steps toward the enhancement of all joint chemical and biological training activities—for leaders and units alike. We must use our special expertise to "shape" joint NBC training exercises to provide CINC and joint force commanders and staffs realistic weapons of mass destruction scenarios that test plans, provide lessons learned, and identify shortfalls and requirements.

Army After Next

The Army's emerging long-term vision is the AAN. The AAN process stretches to conceptualize the geostrategic environment 30 years into the future. The research focus of AAN is initially in four areas:

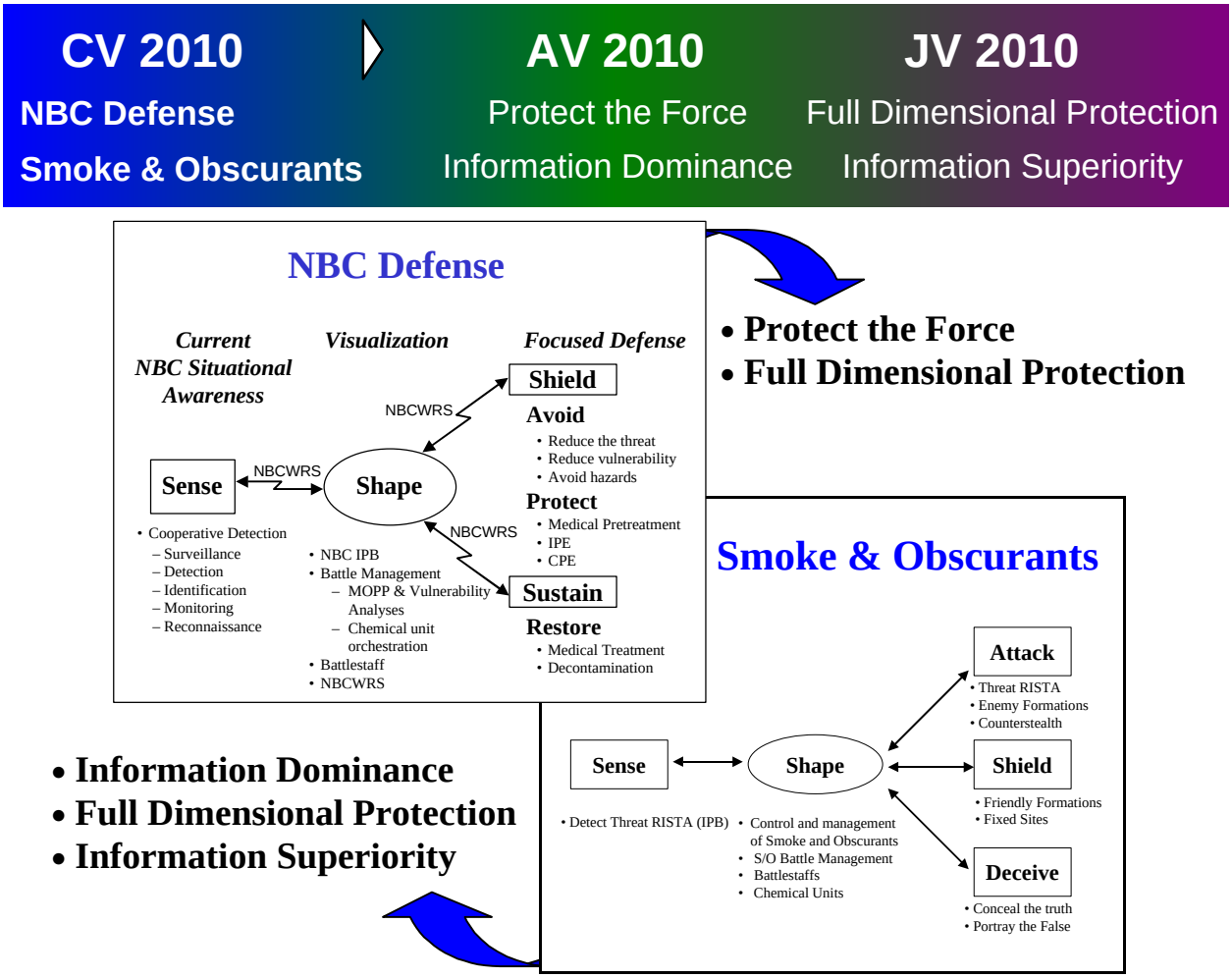
- Probable geopolitical realities (ensure stability across the entire spectrum)
- Evolving military art (balance precision engagement and dominate maneuver)
- Technology (quick capitalization of Information Dominance)
- Human and Organizational Behavior (a mature, cohesive force operating at the limits of human cognition)

The Chemical Corps will use the principles in the ***CV 2010*** to focus research to refine and enhance protection for the AAN by providing:

- Tailorable chemical force structure in the active and reserve components that counters all NBC threats, foreign and domestic.
- Real-time visualization that projects into the future.
- Nondegrading individual protection, viable collective protection, and medical pretreatments and therapy for casualties from biological and chemical weapons and the residual effects of radiation.
- Vehicles and equipment (including electronic or sensitive items) that self-decontaminate or are readily decontaminated using state-of-the-art equipment and decontaminants.
- A decision support tool that uses artificial intelligence to conduct Mission Oriented Protective Posture (MOPP) and vulnerability analyses, provides recommendations for optimal positioning of sensors and chemical units, and assists in planning and coordination for smoke and obscurant missions.

Chemical Vision 2010

CV 2010 is our azimuth for the Chemical Corps to support the force by enabling the commander to minimize casualities and preserve combat power in an NBC environment, and to create information superiority by using smoke and obscurants. Operationally, if the enemy has an offensive NBC capability, our primary goal is to deter threat use. If deterrence fails, our mission becomes to defend against an NBC attack with minimal casualties and degradation, allowing commanders to quickly restore full combat power and continue their mission across the full spectrum of operating environments. CV 2010 principles directly support the AV 2010 patterns of operations, **Protect the Force** and **Information Dominance**, and the JV 2010 principles of **Full Dimentional Protection** and **Information Superiority**.



NBC DEFENSE

SENSE | **PROTECT THE FORCE** | **FULL DIMENSIONAL PROTECTION**

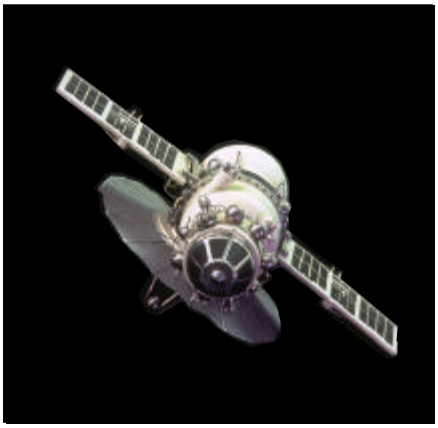
Sensing the battlespace provides the current NBC situational awareness by identifying NBC hazards in air, water or on land, personnel, equipment or facilities, and the physical state of the hazard (gas, liquid, solid). Sense is a key enabler to avoid contamination, take protective action, and restore combat power.

The cooperative detection system will consist of NBC surveillance, detection, identification, monitoring, and reconnaissance elements that feed into the NBC Battle Management System. This includes NBC reconnaissance units, and ground, air, and space based sensors and detectors, arranged in an array, and electronically linked. The integration of these elements, coupled with the information from the intelligence system and theater missile defense system, will allow the detectors and sensors to achieve agreement and counterbalance weaknesses or technological limitations in any single chemical unit, detector or sensor. False alarms will be filtered out or minimized by automated assessment methods and verification from downwind sensors, detectors, or units.

Ends
- NBC Situational Awareness

Ways
- Cooperative Detection
  - Surveillance
  - Detection
  - Identification
  - Monitoring
  - Reconnaissance

Means
- Chemical Units
- Unit Detectors
- Ground, Air, and Space based Sensors and Detectors



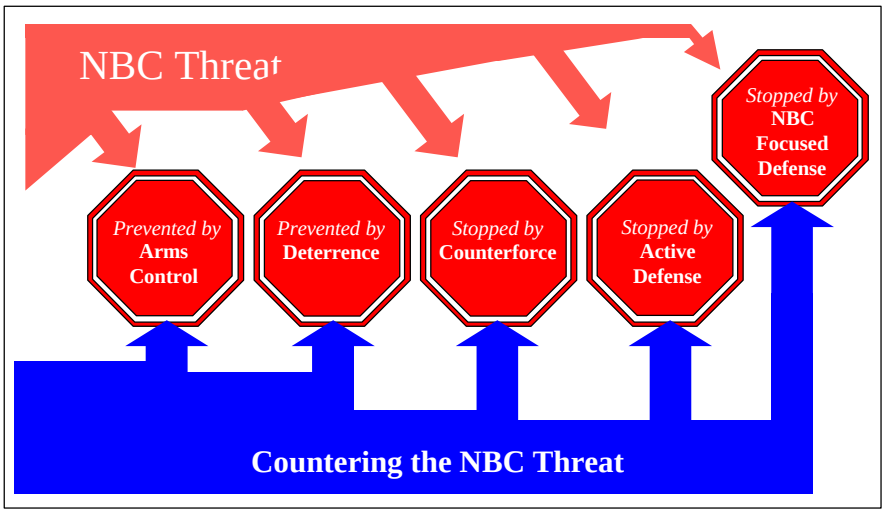
Shape provides the capability for NBC visualization of the battlespace. NBC visualization is the process whereby the commander develops a clear understanding of the current NBC situation, envisions the end state (contamination avoidance, protection, and restoration), and visualizes the sequence that moves the commander's force from its current state to the end state. This does two important things for the maneuver commander: minimizes casualties in an NBC environment and preserves combat power. The cooperative detection system and the NBC Battle Management System must be used together with the commander and battlestaff's judgement, experience, and intuition to enhance the NBC visualization of the battlespace. The chemical commander will become the primary advisor to the maneuver commander on all aspects of employment of chemical units.

Ends
- Minimize Casualties
- Maximize OPTEMPO

Ways
- Orchestrate NBC Defense

Means
- NBC Battle Management System
- NBC Battle Staff
- NBC Warning and Reporting System
- Trained Leaders

Shape is the orchestration of NBC defense through the integration of the principles of sense, shield, and sustain. This is accomplished through the NBC Battle Management System. The NBC Battle Management System integrates digitized terrain data, meteorological and micrometeorological data, information from intelligence systems with unit detector and sensor data to determine where the hazard is, where it has been, and where it is going. The NBC Battle Management System allows leaders to use the NBC common operational picture constructed by cooperative detection, NBC Intelligence Preparation of the Battlespace (NBC IPB), operations, weather, and unit locations to visualize (coordinate, direct, control and conduct) the optimum NBC defense of the force. Shaping will guide the response to NBC attacks and connect the diverse joint force through a network that identifies hazard movement in time for the force to shield. Shaping allows resource optimization, mitigation, and rapid restoration of maximum combat power.



Shielding the force uses a multitiered approach to counter the NBC threat before, during, and after an NBC attack.

- Shielding begins at the strategic level with **arms control**. Specific objectives of the arms control initiative are to prevent the acquisition of NBC weapons and their delivery systems, and to assist military planning to respond to regional contingencies in which U.S. forces face NBC threats.

- The second tier in countering the threat is to **deter** the threat by convincing potential and actual proliferants that NBC weapons will be of no value because the U.S. and partners will deny or limit their political and military advantage due to NBC defense readiness, and because our retaliation will far outweigh any potential benefits of use.

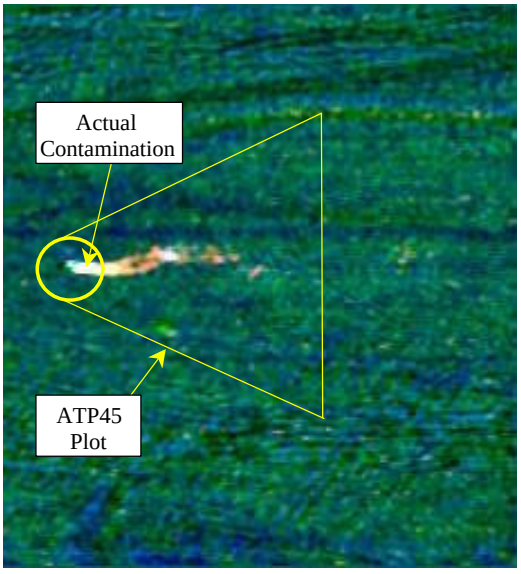
- The next two tiers in countering the threat focus on destruction of the threat prior to and during an attack. While arms control and deterrence through retaliation and readiness remain fundamental objectives, an enemy's use of NBC weapons will remain a viable threat. Through **counterforce** and **active defense**, U.S. forces must be able to detect and destroy the enemy's NBC weapons and support facilities during all stages of their activation. This includes being able to detect and destroy an enemy's aircraft, missile launchers, and other long-range delivery systems or reduce their target acquisition and targeting capability. This also includes in-flight interdiction of missiles through Theater Missile Defense (TMD) assets. The Theater Commander will target and destroy the enemy's NBC production facilities, transportation assets, and command and control facilities, whenever possible.

- The final tier in countering the threat is **NBC Focused Defense**. Focused Defense prevents NBC casualties through medical pretreatments, contamination avoidance, and physical protection. Shielding begins in the predeployment phase, pretreating soldiers to minimize the chemical, biological and residual radiation threat. Focused Defense leverages sensing and shaping the battlespace to avoid contamination. If the contamination cannot be avoided, shielding prevents casualties by protecting exposure to the hazard. Shielding provides a contamination-free environment for personnel and equipment. The Joint Force will operate with substantial shielding from NBC hazards. NBC protective equipment will be lightweight, durable, and provide full protection from battlefield NBC hazards. It will be fully compatible with other equipment such as advanced night vision and optical systems. Personnel wearing individual protective equipment will operate for extended periods against direct with minimal degradation to individual and unit performance. Equipment will be designed to withstand NBC hazards and facilitate rapid removal of contamination. Personnel will be provided with medical vaccines, pretreatments, and skin protectants to provide increased resistance to NBC hazards.

Ends
- Minimize Casualties
- Preserve Combat Power

Ways
- Focused Defense
  - Avoid Contamination
  - Protect against Contamination

Means
- NBC Recon Units
- Cooperative Detection System
- NBC Battle Mgmt System
- NBC Warning and Reporting System
- Individual Protection Equipment
- Collective Protection Equipment
- Medical Pretreatments



Despite avoidance efforts, a unit may become contaminated, either by direct attack or if the mission dictates movement through a contaminated area. **Sustaining** the force includes decontamination and medical intervention that allows rapid return of personnel and units to a near-normal operating capability after an NBC attack.

Ends
- Minimize Casualties
- Maximize OPTEMPO

Ways
- Decontamination
- Medical Treatment

Means
- Chemical Decon Units
- Fixed Site Decon System
- Modular Decon System
- Casualty Decon System
- Medical Intervention

Future decontamination and medical efforts will support force sustainment by quickly restoring combat power and diagnosing and treating NBC casualties. Modular decontamination systems will be flexible and responsive to decentralized decontamination. Fixed site, equipment, and personnel decontamination will be a critically required capability for power projection platforms, ports of embarkation, and ports of debarkation. The digitized force mandates the capability to decontaminate electronic and sensitive equipment. Sortie generation and throughput of supplies will be sustained or quickly restored after being contaminated because of flexible doctrine, highly responsive equipment and force structure. Medical treatment of NBC casualties will arrest or reverse the damage caused by the agent, maximizing soldiers' return to duty.

Today

Tomorrow

SMOKE AND OBSCURANTS

SENSE | **INFORMATION DOMINANCE** | **FULL DIMENSIONAL PROTECTION**

The first step to creating information superiority over the enemy is to determine the sensor capabilities that can be arrayed in the battlespace. The **sensing** of threat Reconnaissance, Intelligence, Surveillance, and Target Acquisition (RISTA) through the Intelligence Preparation of the Battlespace (IPB) provides identification of those threat capabilities. This identification enables the commander to best utilize his smoke and obscurant capabilities to selectively defeat threat RISTA.

Ends
- Identify threat RISTA

Ways
- All Source Intelligence collection

Means
- Ground, Air, and Space based Sensors
- Battlestaff
- Reconnaissance and Surveillance

SHAPE | **INFORMATION DOMINANCE** | **FULL DIMENSIONAL PROTECTION**

Shape orchestrates smoke and obscurant employment by visualizing the defeat of threat RISTA capabilities identified by sensing. Shape provides information dominance to the commander by using smoke and obscurants to attack threat RISTA systems and enemy formations, shield friendly formations and fixed sites, and deceive the enemy by concealing the truth and portraying the false, without affecting friendly capabilities. Shape requires the enemy to devote additional assets to acquire information or abandon his plan. An automated smoke and obscurant battlefield management system will assist in the planning, rehearsal and execution of all smoke and obscurant missions to ensure that smoke support is fully integrated into the operational plan. Smoke unit capabilities must evolve to support large area and long-duration smoke and obscurant missions across the electromagnetic spectrum, independent of wind direction.

Ends
- Commander's operational advantage through Information Dominance

Ways
- Orchestrate smoke and obscurant employment

Means
- Smoke and Obscurant Battle Management System
- Battlestaff
- Trained Leaders

Smoke and obscurants will become a tool for the commander to attack threat RISTA by creating an information disparity via:

- ✓ Defeating threat reconnaissance efforts by intrusion detection, terrain denial, counter stealth, and "painting" the enemy.
- ✓ Defeating threat intelligence collection and surveillance efforts by blocking the electomagnetic spectrum.
- Defeating threat target acquisition systems including missiles, laser-guided munitions, and direct fire weapons.

Additionally, the commander may emplace smoke and obscurants on enemy formations to disrupt command and control and OPTEMPO, and paint the enemy to enhance our target acquisition capability.

Ends

- Commander's operational advantage through Information Dominance

Ways

- Emplace smoke and obscurants on the enemy
- Emplace smoke and obscurants between the enemy and the force

Means

- Chemical Smoke Units
- Projected smoke and obscurants

SHIELD | INFORMATION DOMINANCE | FULL DIMENSIONAL PROTECTION

The commander will use smoke and obscurants to shield friendly formations and critical fixed sites. This will complicate the enemy's targeting sequence by introducing uncertainties in time and space. Employment of smoke and obscurants will not restrict friendly capabilities.

Ends
- Commander's operational advantage through Information Dominance

Ways
- Emplace smoke and obscurants on the force
- Emplace smoke and obscurants between the enemy and the Force

Means
- Chemical Smoke Units
- Onboard vehicular smoke
- Smoke Pots
- Remote (UAV) smoke and obscurant delivery

DECEIVE | INFORMATION DOMINANCE | FULL DIMENSIONAL PROTECTION

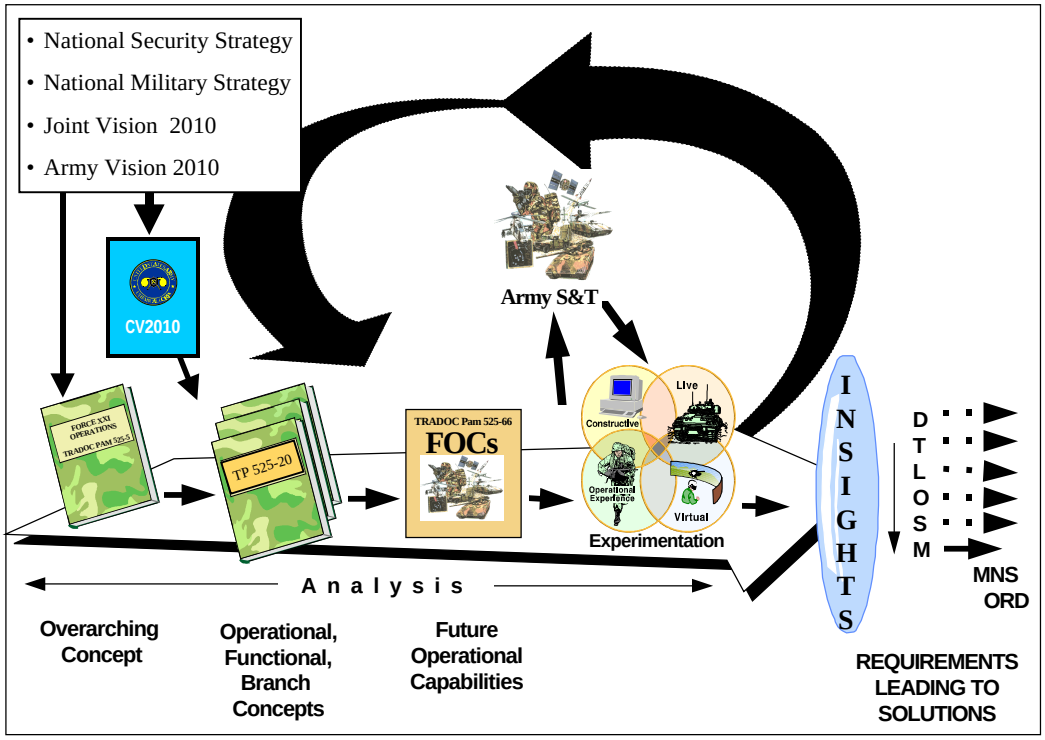
Deception operations support shielding activities by concealing the truth and portraying the false. Deception smoke and obscurants missions must be integrated with information operations to achieve the overall desired response from the enemy commander. Deception smoke and obscurants becomes a combat multiplier by introducing misinformation into the threat commander's decision cycle.

Ends
- Commander's operational advantage through Information Dominance

Ways
- Emplace smoke and obscurants for deception

Means
- Chemical Smoke Units
- Smoke Pots
- Remote (UAV) smoke and obscurant delivery

DTLOMS IMPLICATIONS



The requirements determination process mandates that we take a holistic approach to Doctrine, Training, Leader Development, Organization, Materiel, and Soldiers (DTLOMS) to create synergy. A weakness in any DTLOMS area negates the overmatch capability provided by the other five areas.

Every effort we make in DTLOMS must focus on how chemical soldiers, and chemical units can support the force by **MINIMIZING CASUALTIES** and **PRESERVING COMBAT POWER**.

CV 2010 sets the azimuth for the Chemical Corps based on guidance from AV 2010, JV 2010 and the National Military Strategy. The Chemical Corps' capstone concepts TRADOC Pamplet (TP) 525-3, U.S. Army Operations Concept for Smoke and Obscurants, and TP 525-20, U.S. Army Operations Concept for NBC Defense, expand on the azimuth from the vision by describing the future operational capabilities (FOCs) the force requires in smoke and obscurants and NBC defense. Experimentation, such as Advanced Warfighting Experiments, Operation Joint Endeavor and Operation Desert Thunder, the combat training centers, and modeling and simulations, all provide an opportunity to test these FOCs in order for the Science and Technology

community to best spend our research and development dollars exploiting technological opportunities. The end result of this interchange between FOCs, experimentation, and science and technology is a holistic approach to insights that lead to changes in DTLOMS.

Doctrine provides the principles under which the Joint Force will conduct operations within a potentially contaminated battlespace. Efforts will directly support the employment of chemical platoons, companies, battalions and brigades. This doctrine must delineate responsiblities and standards for operational concerns across the spectrum of conflict and develop capabilities to leverage Force XXI NBC capabilities, and incorporate knowledge and speed. **Training** and **Leader Development** efforts must directly support the training of our soldiers to incorporate future doctrine with our chemical units and equipment. Training must include new and innovative techniques for leaders and soldiers. Leaders must develop their professional understanding of doctrine and employment, and train their units and soldiers to operational readiness. **Organizations** (the chemical force structure) must find the right mix of active, reserve and multicomponent NBC reconnaissance, decontamination, smoke, and multipurpose units to support the force. The key to obtaining the optimal mix is ensuring that chemical units are available for deployment when required and organized to accomplish the mission. **Materiel** development of new systems and equipment must leverage technological opportunities to provide leap-ahead capabilities. The design of systems and supporting equipment must include embedded training, the capability to use actual or training systems in tactical exercises, and simple, user-friendly maintenance. It must include consideration of soldier capabilities, logistical support and operation of the equipment in extreme conditions.

Chemical **Soldiers** are the heart of our Corps. Our leaders must ensure that chemical soldiers in NBC reconnaissance, decontamination, and smoke units, on Battlestaffs, and at company-level, are recruited and retained in greater numbers than at any time in the past.

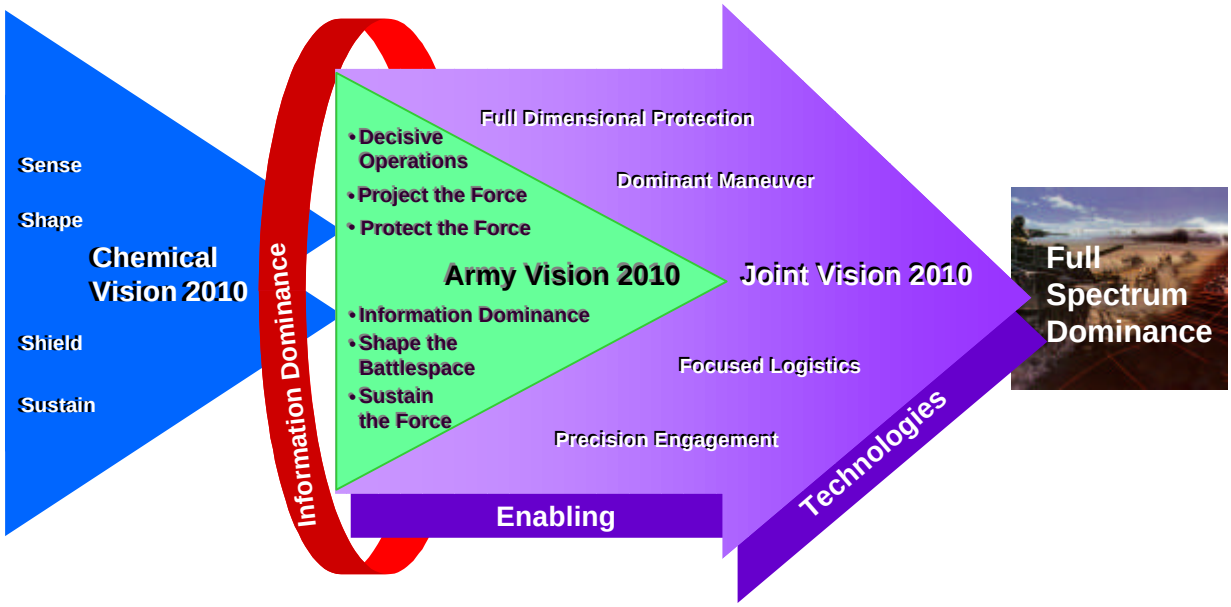
CONCLUSION

"America's military superiority cannot shield us completely from this (nuclear, biological, and chemical) threat. Indeed, a paradox of the new strategic environment is that American military superiority actually increases the threat of nuclear, biological, and chemical attack against us by creating incentives for adversaries to challenge us asymmetrically."

William Cohen
U.S. Secretary of Defense

To protect the Joint Force from the NBC threat in 2010, the Department of Defense expects the Chemical Corps team—officers, NCOs, soldiers and civilians—to provide the leadership, experience and knowlege to meet this challenge. The Chemical Corps must focus on how to mitigate this threat by supporting full dimensional protection and information superiority.

The Chemical Corps will provide this support through trained and ready chemical soldiers and NBC units capable of conducting reconnaissance, decontamination, and smoke missions—platoons, companies, battalions and brigades—in the active and reserve components. Dragon Soldiers will continue to be the catalyst for an NBC trained and ready capabilities-based Army and Joint Force.



Vision 2010 Operational Concepts

Full Dimensional Protection **- The control of the battlespace to ensure our forces can maintain freedom of action during deployment, maneuver, and engagement while providing multilayered defenses for our forces and facilities at all levels.**

Gain Information Superiority **- The capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.**

Dominant Maneuver - The multidimensional application of information, engagement, and mobility capabilities to position and employ widely dispersed joint air, land, sea, and space forces to accomplish the assigned operational tasks.

Focused Logistics - The fusion of information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets even while enroute, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical level of operations.

Precision Engagement - A system of systems that enables our forces to locate the objective or target, provide responsive command and control, generate the desired effect, assess our level of success, and retain the flexibility to reengage with precision when required.

Army Vision 2010 Patterns of Operations

Protect the Force **- The protection of critical, high-value operational and strategic assets from enemy air, land, and sea attack.**

Gain Information Dominance **- This is accomplished through offensive and defensive information operations that create a disparity between what we know about our battlespace and operations within it and what the enemy knows about his battlespace.**

Project the Force - This initiates the process of creating an image in the mind of an adversary of an unstoppable force of unequaled competence. American land forces will begin this process of moral domination from points of embarkation around the world.

Shape the Battlespace - The unambiguous integration of all combat multipliers that sets the conditions in terms, not only of what we do to the enemy, but also how we posture the friendly force and take advantage of the operational environment.

Decisive Operations - Force the enemy to decide to give in to our will. Within the patterns of operations, decisive operations are the means of achieving success.

Sustain the Force - The fusion of logistics and information technologies, flexible and agile combat service support organizations, and new doctrinal support concepts to provide rapid crisis response to deliver precisely tailored logistics packages directly to each level of military operations.